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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/609,132

Filing Date: June 26, 2003

Appellant(s): BOECKL ET AL.

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Guy V. Tucker  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 02/23/2009 appealing from the Office action mailed 06/17/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US 5,753,302	SUN et al. (SUN'302)	5-1998
US 6,168,666	SUN (SUN'666)	1-2001
US 5,858,099	SUN et al. (SUN'099)	1-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

I.     Claims 1-3, 6-12, 14, 19-21, 31-34, 36-39, 59, 66 and 67 stand rejected under 35 U.S.C. 102(b) as being anticipated by SUN'302 et al. (US 5,753,302).

- With respect to claims 1-3, 6, 7 and 66, SUN'302 discloses an acoustic dispenser (1710) that meets all of Appellant's claimed subject matter; in particular, the acoustic dispenser of SUN'302 comprises: a hopper (1780) adapted to contain pharmaceutical powder, and a vibrating membrane (1760) that vibrates at a selected frequency, preferably at resonant frequency (col. 8, lines 41-54) and disturbs the air within the hopper (1780) to dispense the powder through an outlet of the hopper (where a receiving substrate 1790 is located according to FIG. 1). Regarding the functional language of the supply of powder being spaced from the vibratable member when the powder is present in the hopper and the vibratable member is not vibrating and whereby the chamber may be filled by powder flowing through the outlet and into the chamber, the acoustic dispenser of SUN'302 is fully capable of holding the pharmaceutical powder on a separation membrane (mesh 1770) that is spaced from the vibratable membrane (1760) when the acoustic dispenser is turned up side down (from the illustration of FIG. 1),

whereby pharmaceutical powder may flow through the separation membrane (1770) into the outlet of the hopper with or without the vibratable membrane being vibrated.

- With respect to claim 8, the membrane (1760) of the acoustic dispenser (1710) of SUN'302 is operated at audible range having known frequency of about 20Hz to about 200kHz, which includes the range of about 10Hz to about 1kHz as claimed.
- With respect to claims 9-11, the membrane (1760) in the acoustic dispenser of SUN'302 is the powder vibrating member that vibrates in contact with the powder, and the membrane vibrates in a direction generally parallel to a longitudinal axis of the speaker (1720).
- With respect to claims 12 and 14, the acoustic dispenser of SUN'302 is adapted to dispense pharmaceutical powder into capsules (col. 15, lines 36-40).
- With respect to claims 19-21, the hopper (1780) is an enclosure having side walls and a cover, wherein the cover comprise the membrane (1760) (FIG. 1).
- With respect to claim 66, the vibratable membrane is also considered to be the powder vibrating member that vibrates while in contact with the pharmaceutical powder.
- With respect to claim 67, the vibratable membrane (1760) is a part of a speaker (1720) which has a longitudinal axis through the center of the speaker, wherein the vibratable membrane (1760) is vibrating along the longitudinal axis through the center of the speaker.

II. Claims 1-3, 6, 8, 9, 11-16, 22, 24, 28-34, 36-40 and 60-65 are rejected under 35 U.S.C. 102(b) as being anticipated by SUN'666 (US 6,168,666).

- With respect to claims 1-3, 6, 8, 22 & 24, SUN'666 discloses an acoustic dispenser (FIG. 1) that meets all of Appellant's claimed subject matter; in particular, the acoustic dispenser of SUN'666 comprises: a hopper (BDP) adapted to contain pharmaceutical powder (BEAD), and a vibrating membrane (CONE) spaced from the pharmaceutical powder and is adapted to vibrate at a selected frequency, preferably between 10-400 Hz (col. 15, line 62 – col. 19, line 6) to disturb the air within the hopper (BDP) in order to dispense the powder through the outlet of the hopper (BDP) and into chambers (BCZ).
- With respect to claims 9 and 11, the vibrating membrane (CONE) in the acoustic dispenser of SUN'666 is the powder vibrating member that vibrates in a direction generally parallel to a longitudinal axis of the speaker (S).
- With respect to claims 31-34, 36-38, SUN'666 teaches a method for filling a chamber that meets all of Appellant's claimed subject matter; in particular, the method of SUN'666 comprises the steps of: providing a pharmaceutical powder (BEAD) in a hopper (BDP), providing a mesh (MESH) that separates the pharmaceutical powder (BEAD) and a vibrating membrane (CONE), disturbing air in the hopper by vibrating the vibrating membrane (CONE), and passing the powder through an outlet of the hopper into a chamber (BCZ); wherein the membrane (CONE) is preferably vibrated at a frequency of about 10-400 Hz to fluidize the powder. It is noted that the mesh (MESH) also vibrates in contact

with the pharmaceutical powder (BEAD) as admitted by Appellant in the last paragraph on page 13 of the Brief.

- With respect to claims 12-16, 28-30 and 40, SUN'666 discloses a powder transport chuck (BTC) that includes chambers (BCZ) for holding substrate such as capsules (col. 10, line62 – col. 11, line 8), and/or for receiving the powder and transporting the powder to discharge the powder in creating pharmaceutical compositions (col. 1, lines 5-15).
- With respect to claim 39, the chambers to be filled in the method of SUN'666 include capsules which are normally sealed after being filled; hence, the step of sealing the chamber(s).
- With respect to claims 60-62, SUN'666 discloses an acoustic dispenser (FIG. 1) that meets all of Appellant's claimed subject matter; in particular, the acoustic dispenser of SUN'666 comprises: a hopper (BDP) adapted to contain pharmaceutical powder (BEAD), and a vibrating membrane (CONE) spaced from the pharmaceutical powder and is adapted to vibrate at a selected frequency, preferably between 10-400 Hz (col. 15, line 62 – col. 19, line 6) to disturb the air within the hopper (BDP) in order to dispense the powder through the outlet of the hopper (BDP) and into movable chambers (BCZ) located on a powder transport chuck (BTC); wherein the chambers are movable between a powder collecting position and a powder ejecting position (col. 14, lines 55-62).
- With respect to claim 63, the vibrating membrane (CONE) in the acoustic dispenser of SUN'666 is the powder vibrating member.

- With respect to claim 64, the powder transport chuck (BTC) that includes chambers (BCZ) for receiving the powder and transporting the powder to discharge the powder in a controlled distribution as a metering means in creating pharmaceutical compositions (col. 1, lines 5-15).

III. Claims 17, 18, 41 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUN'666 in view of SUN'099 et al. (US 5,858,099).

- With respect to claims 17, 18, 41 and 65, the acoustic dispenser and method of SUN'666 teaches the chambers (BCZ) in the powder transport chuck (BTC) which meets all of Appellant's claimed subject matter but lacks the specific teaching of the chamber(s) being in a rotating member and the step of rotating the chamber(s) from a powder receiving position to a powder ejecting position. However, SUN'099 discloses an acoustic dispenser and a method of filling chamber that utilize a rotatable powder transport chuck which receives powder from the acoustic dispenser in a receiving position, rotates to an ejecting position to deposit the powder into edible powder receptacles (FIG. 15). Therefore; it would have been obvious to a skilled person in the art, at the time of the invention, to have provided the acoustic dispenser of SUN'666 with a rotatable powder transport chuck, as taught by SUN'099, for transporting the pharmaceutical powder from the acoustic dispenser to an ejecting position in order to discharge the powder into edible receptacles.

IV. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over SUN'302.

The acoustics dispenser of SUN'302 meets all of Appellant's claimed subject matter but lack the specific teaching of the powder vibrating member vibrating at a frequency of about 1000 Hz to about 180,000 Hz. The powder vibrating member is the vibratable membrane that can be vibrated in the known audible range of about 20 Hz to about 20,000 Hz; it would have been obvious to a skilled person in the art to have operate the acoustic dispenser of SUN'302 such that the vibratable membrane vibrates at a frequency of 10,000 Hz, for example, which is well within the claimed range of frequency.

**(10) Response to Argument**

(A) With respect to the rejection of claim 1 and depending claims as being anticipated by SUN'302, appellant argues that:

- First, the SUN'302 reference does not disclose a chamber that is filled with a powder. In response: firstly, the claimed apparatus of claim 1 comprises a hopper and a vibratable membrane; and secondly, the chamber is a work piece and does not form a part of the claimed apparatus. The SUN'302 reference discloses an acoustic dispenser 1710 comprising a hopper 1780 and a vibratable membrane 1760 which structurally satisfies all of appellant claimed subject matter, thus fully anticipates the claimed apparatus.
- Secondly, the SUN'302 reference does not disclose that the vibratable membrane 1760 disturbs a medium within a hopper. In response, the vibratable membrane

1760 does disturb the air within the hopper 1780 when the vibratable membrane 1760 is vibrating to propel objects 1810.

- Thirdly, the SUN'302 reference does not disclose a vibratable membrane that is spaced from the bulk supply of powder. In response, the acoustic dispenser of SUN'302 is full capable of holding the pharmaceutical powder on a mesh 1770 that is spaced apart from the vibratable membrane 1760 when the acoustic dispenser is not in use and is turned up-side down from the illustration of FIG. 1 and when the vibrating membrane 1760 is not vibrating.

(B) Appellant's argument with respect to the rejection of claim 31 and depending claims as being anticipated by SUN'302 has been found persuasive; therefore, the rejection is hereby withdrawn. However, claims 31 and depending claims stand rejected as being anticipated by SUN'666.

(C) With respect to the rejection of claim 66 and depending claims as being anticipated by SUN'302, Appellant argues that the reference to SUN'302 does not disclose both a vibratable membrane and a powder vibrating member in contact with the powder. In response, the vibratable membrane 1760 serves to disturb the medium in the hopper and to physically vibrate the powder and is therefore considered to be equivalent to the claimed vibratable membrane and powder vibrating member. The claim language neither requires the vibratable membrane to be distinct from the vibrating member and/or vice versa, nor precludes a single member from being two differently named members each serves a particular function; therefore, the vibratable

membrane 1760 of SUN'302 serving as the claimed vibratable membrane for disturbing the medium in the hopper and as a vibrating member for physically vibrating the powder structurally satisfies the claimed subject matter of claim 66.

(D) With respect to the rejection of claim 1 and depending claims as being anticipated by SUN'666, Appellant argues that:

- First, the reference to SUN'666 does not disclose a hopper with an outlet. In response, the reference to SUN'666 discloses an acoustic dispenser that structurally satisfies the claimed subject matter, including a hopper BDP for holding pharmaceutical powder BEAD and a vibratable membrane CONE that is spaced apart from the hopper BDP; wherein the hopper BDP does include an outlet where the pharmaceutical powder is dispensed toward the chamber BCZ in a controlled manner depending on the frequency of vibratable membrane CONE.
- Secondly, the reference to SUN'666 does not disclose a vibratable membrane that is spaced from the bulk supply of powder. In response, it is noted that the pharmaceutical powder BEAD is held on a mesh MESH that is spaced from the vibratable membrane CONE which structurally satisfies the claimed subject matter of claim 1 regardless of whether or not the mesh MESH can be considered as a part of the vibrating membrane as alleged by Appellant.

(E) With respect to the rejection of claim 22 and depending claims as being anticipated by SUN'666, Appellant argues that:

- First, the reference to SUN'666 does not disclose a hopper with an opening and a vibrating member comprising a membrane spaced from the powder when the vibratable member is not vibrating. In response, the reference to SUN'666 discloses an acoustic dispenser that structurally satisfies the claimed subject matter, including a hopper BDP for holding pharmaceutical powder BEAD and a vibratable membrane CONE that is spaced apart from the hopper BDP; wherein the hopper BDP does include an opening where the pharmaceutical powder BEAD is dispensed toward the chamber BCZ.
- Secondly, the reference to SUN'666 does not disclose a vibratable membrane that is capable of fluidizing powder that is not in contact with the vibratable membrane. In response, it is noted that the pharmaceutical powder BEAD is held on a mesh MESH that is spaced from the vibratable membrane CONE which structurally satisfies the claimed subject matter of claim 1 because the vibratable membrane CONE is fully capable of moving the powder BEAD when it is vibrating.

(E) With respect to the rejection of claim 31 and depending claims as being anticipated by SUN'666, Appellant argues that the reference to SUN'666 does not disclose a step of provide a separation between the powder and the vibratable membrane and a step of passing the powder through an outlet. In response, (1) the reference to SUN'666 clearly teaches that the vibrating membrane CONE vibrates to produce acoustic energy which disturbs the air in the hopper (BDP) in order to fluidize the powder BEAD without contacting the powder (col. 13, lines 4-20; FIG. 1); and (2) the hopper BDP does include an outlet where the pharmaceutical powder is dispensed toward the chamber BCZ in a controlled manner depending on the frequency of vibratable membrane CONE.

(F) With respect to the rejection of claim 60 and depending claims as being anticipated by SUN'666, Appellant argues that the reference to SUN'666 does not disclose an outlet and a chamber movable between a powder collecting position and a powder ejecting position. In response, (1) the hopper BDP does include an outlet where the pharmaceutical powder is dispensed toward the chamber BCZ in a controlled manner depending on the frequency of vibratable membrane CONE; and (2) the chamber BCZ is located on a transport chuck BTC that transport the chamber BCZ between a powder collecting position to a powder ejecting position (col. 14, lines 55-62).

(G) With respect to the rejection of claims 17, 18, 41 & 65 as being unpatentable over SUN'666 in view of SUN'099, Appellant argues that the combination of SUN'666 and SUN'099 does not render claims 17, 18, 41 & 65 unpatentable because of the deficiencies with respect to independent claims 1, 31 & 60, that SUN'099 does not make up for the deficiencies, and that SUN'666 fails to disclose a rotatable powder transport chuck. In response, it is noted that the reference to SUN'666 anticipates claims 1, 31 & 60 as discussed above, and that it would have been obvious to combine the teaching of SUN'666 and SUN'099 because they are commonly owned, thus is well within the knowledge of the ordinary skilled person in the art.

(H) With respect to the rejection of claim 68 and depending claims as being unpatentable over SUN'302, Appellant argues that the reference to SUN'302 does not render claim 68 obvious because claim 68 depends on allowable claim 66, and that claim 68 recites a frequency range that is not taught by SUN'302. In response, it is noted that the powder vibrating member is the vibratable membrane that can be vibrated in the known audible range of about 20 Hz to about 20,000 Hz; therefore, it would have been obvious to a skilled person in the art to have operated the acoustic dispenser of SUN'302 such that the vibratable membrane vibrates at a frequency of 10,000 Hz, for example, or any audible frequency of about 1000 Hz to about 20,000 Hz in order to propel the pharmaceutical powder, which operating frequency is well within the claimed frequency range of about 1000 Hz to about 180,000 Hz.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Louis K. Huynh/  
Primary Examiner, Art Unit 3721

Conferees:

/Rinaldi I Rada/  
Supervisory Patent Examiner, Art Unit 3721

/Henry Yuen/  
SPRE, Technology Center 3700